Basics of video production

H2GY1K

LECTURE SUMMARY

Covered in this lecture:

Intro to the production phase

- When creating a video, every detail has to be planned and prepped in advance
- If you're shooting inside, you have to prepare the space, the participants, set up the equipment, etc.
- If you're shooting outside, you have to wait for the weather to be adequate
- **The core requirements for video production are:**
  - video - the camera you use, lenses, camera settings
  - audio - microphones, soundproofing the room and eliminating noises
  - lighting - types of light bulbs, natural vs. artificial light
  - scene - location & mood

Lighting - Types of light bulbs

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LECTURE SUMMARY

Covered in this lecture:

What type of light bulbs to use

- Lighting is the most important element of video production
- In video marketing, lighting is mainly used to:
  - illuminate the subject
  - make the subject look as good as possible
- A good lighting setup aims to eliminate sharp shadows on people's faces
- Natural lighting is the best, but the most difficult to use in video production
- Shooting outside requires more skill, because you can't control everything
- **The best time to shoot outside is "the golden period", about 1,5 hours before the sunset, because the light is softer and creates less harsh shadows**
- The color temperature of a light bulb is measured in degrees Kelvin
- The lower the color temperature, the more yellow the light is

Types of light bulbs:

- **#1 Tungsten / incandescent - 2500-3200 K**

  - Pros: warmer light, easier on the eyes, cheaper
  - Cons: they get very hot

- **#2 Daylight / Fluorescent - 5000-6500 K**

  - Pros: they provide more clarity, they don't get as hot
  - Cons: the bright white can be straining on the eyes

- **#3 LEDs - they come in different color temperatures**

  - Pros: they're compact, they don't produce any heat, they can be battery powered
  - Cons: expensive, the affordable ones might have issues

- Don't mix the color temperatures of your bulbs

- Cameras have a color correction setting depending on what type of bulb you're using

- **The CRI (Color Rendering Index) of the bulb measures its ability to produce accurate color and it's between 0-100 - aim for anything over 90**

Lighting - Lighting setups

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LECTURE SUMMARY

Covered in this lecture:

How to set up your lights

- Choose the type of lights you want to use and then shut off all the lights that you don't need
- The video format you want to create will dictate what lighting equipment you'll need
- The more people in the video, the more lights you need
- When you're lighting a subject, the standard is to have 3 lights:
  - key light - it fills 80% of your subject from a 45 degree angle
  - fill light - it fills the other side of the subject to soften the shadows
  - back/hair light - it's positioned behind the subject, creating a separation between the subject and the background
- **For a simpler setup, you can use flat lighting, which means using just 2 lights, one for each side**
- If you have two subjects, there are 2 options:
  - use 4 lights, 2 for each subject
  - use 2 lights, one for each side, but they have to be larger to cover both subjects equally

- Background lighting is used to brighten up the background, because bright scenes create a happier mood

- Other pieces of equipment you will need for lighting:

- **#1 Light stands**

  - they're used to hold the lights
  - aim for medium priced ones so they last longer and they can hold larger lights

- **#2 Clamps**

  - they're used to hang lights wherever you need them

- **#3 Soft boxes**

  - they're used when you have a small light but want to expand it - large sources of light create softer shadows
  - they're a great way to use cheaper lights and enhance them

- **#4 Seamless paper**

  - it's used for the background of a video with one subject talking to the camera
  - it's usually accompanied by a back light that lightens the center of the background

- Accessory lights:

- **#1 Ring light**

  - it's a circular light in the center of which you put the camera
  - it's very popular on YouTube
  - cons: it's not good for the eyes

- **#2 Back light**

  - it's used to create a separation between the subject and the background

- **#3 Fresnel light**

  - it’s like a spotlight that’s pointing to the background

- It’s much easier to use the right lighting than trying to fix things afterwards, in editing

- When the video doesn’t turn out great because of the lighting, the best thing to do is reshoot

Audio - Types of microphones

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LECTURE SUMMARY

Covered in this lecture:

Picking your microphones

- There are some types of videos where audio is the most important element - for instance, when someone is explaining something, you need to hear them clearly
- Bad audio can take viewers out of the experience and make them stop the video and move on to something else
- Bad lighting is not a game-ender in most cases, but bad audio definitely is
- In movies, audio can create moods by using music and sound effects
- **In marketing videos, the main aspects to focus on are:**
  - clearly capturing what people say
  - eliminating all background noises
- **You will need microphones to pick up the sounds, and audio recording devices to record it in order to be synced with the video in the editing phase**
- Some microphones can be connected directly to your camera so you can skip the recording device
- **Never use the mic embedded into the camera (on board microphone) because the audio quality will be low**

- Types of microphones:

- **#1 Shotgun mic**

  - long, thin, used to capture sound from a specific direction
  - it's attached to a boom stand that points into the direction of the sound you want to capture
  - the closer it is to the speaker, the less noise it picks up from the room
  - they can be expensive but they deliver the best audio quality

- **#2 Lavalier mic**

  - small microphone that you can clip onto your shirt
  - they can be wired or wireless
  - it's used when subjects are moving around or the space is too wide and you don't want a shotgun mic in the frame
  - they capture pretty good sound and are cheaper, but they're not as good as a shotgun and you can see them on the subject's shirt
  - keep in mind that any motion might create a rubbing noise that the lav will pick up

- **#3 USB mic**

  - they're good for recording things directly into your laptop, like a screencast

Audio - Soundproofing the space

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LECTURE SUMMARY

Covered in this lecture:

Eliminating noises

- In any space, there are sounds that might interfere with your recording - a fridge, an air conditioning device, traffic, bird sounds, etc.
- One of your goals is to eliminate these sounds as much as possible
- Choose a location that's as isolated as possible, and then optimize your room to eliminate noise and reduce reverb (echo)
- The best way to test a room for reverb is to clap and see if you hear a flat sound or not

- **How to do an acoustic treatment:**
  - listen to the room, turn off any machine that makes a sound, and close the windows
  - reduce the reverb by hanging blankets to split the space and filling the room with more stuff
  - invest in foam pads and bass traps to cover the walls with (if the space owner allows you)

- **Audio recorders are small boxes that you use to record sound coming from the microphone**
- You need to do audio monitoring to make sure the recorder continues to work during the shooting

Video - Intro to video resolution

H2GY1K

LECTURE SUMMARY

Covered in this lecture:

What you need to know about resolution

- **Video resolution refers to how much detail a screen can show or a camera can record**
- The standard right now is 1080p (full HD), p meaning progressive scan - the technology that TVs use to scan the pixels and display them
- **The standard aspect ratio of a video is 16:9 (1920x1080)**
- The latest resolution is 4K (3840x2160)
- If you shoot with multiple cameras at the same time, make sure they all have the same resolution
- It's important to figure out what kind of device your customers will use to view your video and adapt accordingly
- Even if most devices are still only displaying in 1080p, shooting in 4K means you'll have twice as many pixels to work with
- When you edit the video and want to zoom in, you won't lose the quality
- **Downsampling is a process that turns a 4K video into a 1080p video by choosing only the best pixels**

Video - Types of cameras

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LECTURE SUMMARY

Covered in this lecture:

Types of cameras you can use

- **#1 Smartphones**

  - the new phones can shoot in a very good quality
  - it saves you a lot of money
  - it won't help you if you don't have good lighting and audio set up (poor dynamic range: phone cameras are not great at displaying wide ranges of color)
  - cons:
    - smartphones only have one camera lens, you can't change it
    - the zoom is digital
    - it uses auto-focus and auto-adjust
    - phones don't have a lot of storage space
  - use them when you have no budget or you're just trying out video for the first time

- **#2 Consumer cameras**

  - they're simple to use and they have most of the basic settings
  - they're small, portable, and easy to handle
  - they can record in 1080p
  - look for mirrorless cameras (they're the best for video)

- **#3 Pro-sumer cameras**

  - they have more advanced chips and settings
  - they can shoot in 4K
  - they have more options for capturing audio and changing the lens
  - they’re more expensive and the accessories for them are also very expensive
  - look for DSLRs between $800-$1200

Video - Video equipment

H2GY1K

LECTURE SUMMARY

Covered in this lecture:

Video equipment you need to have

- **#1 Tripod**

  - it provides stability for your image
  - invest in the second/third cheapest one to make sure it won't break quickly
  - it can have a ball head or a pan head

- **#2 Memory**

  - cameras usually record on a removable memory card
  - 32 GB is fine if you're shooting in 1080p, but for 4K you will need a lot more memory

- **#3 Batteries for the camera**

  - always bring as many as you can to the shooting
  - you can use a DC adapter if you have the possibility to keep it plugged in when shooting
  - you can use battery grips, which attach to the camera and double the size of your battery

- **#4 Lenses**

  - good lenses can make up for having a cheaper camera
  - they allow you to have different shot styles (close-ups, wide shots, fish eye, etc.)
  - look at the mm length - wide lenses have low mm, zoom lenses have high mm

- in marketing videos, you’re not really going to use wide lenses - go for the medium length
- fixed lenses can’t zoom in or out, but zoom lenses can
- fixed lenses have better image quality, but zoom lenses are better when there is a lot of movement

Production setups - #1 The cheap package

H2GY1K

LECTURE SUMMARY

Covered in this lecture:

Equipment for low budgets

- You can create videos with any kind of budget as long as you know the basics and you get out and try different things
- Here's what you can get for a budget of under $500
- Video:
  - shoot with your smartphone as long as it has a good resolution
- Audio:
  - audio attachments that plug into your iPhone
  - Zoom H1 recorder
  - get the cheapest boom stand to put the Zoom recorder on
- Lighting:
  - use regular or daylight bulbs & add a reflector to them
  - wax paper is a cheap way to diffuse the light if you tape it on top of the bulb
  - you can use cheap LED light panels
  - get the cheapest light stands
- Tripod:
  - you can have someone hold the smartphone and then apply the warp stabilizer setting in editing
  - buy a gorilla pod

Production setups - #2 The standard package

H2GY1K

LECTURE SUMMARY

Covered in this lecture:

Equipment for a medium budget

- For a medium level package, you'll need about $500-$1000

- Video:
  - buy a consumer camera that doesn't shoot in 4K
  - you can also rent a better camera
  - don't shoot below 16 mega pixels

- Lighting:
  - you only need two lights + soft boxes (find cheap stuff on Amazon)
  - try using a Chinese paper lantern

- Audio:
  - use a lavalier
  - don't buy a cheap shotgun mic

- Other things you can buy:
  - seamless paper
  - memory cards
  - cheap tripod and light stands
  - old blankets for soundproofing

Production setups - #3 Advanced packages

H2GY1K

LECTURE SUMMARY

Covered in this lecture:

Equipment for a bigger budget

- For an advanced package, be prepared to spend between $1000-$2000

- Video:
  - buy a used pro-sumer camera

- Lighting:
  - you can use two LED panels

- Audio:
  - get a shotgun mic
  - Zoom H4 recorder
  - you can get a more expensive wired lavalier
  - acoustic panels for soundproofing

- For a budget above $2000, you can get:
  - two cameras, so you can have two camera angles to switch between (it looks more professional)
  - Kino Flo lights
  - more lenses for your specific purposes
  - extra accessories like sliders, dollies, etc.
  - better soundproofing with nicer looking sound panels

Setup #1: The Wistia shot

H2GY1K

LECTURE SUMMARY

Covered in this lecture:

How Wistia sets up their videos

- Your video setup includes how you position your camera and the people who show up in the video, and how your background looks like
- Figuring your setup first helps you buy the right equipment for it
- Wistia is a video hosting company and they make a lot of video tutorials about how to create videos
- **Their most popular setup for their videos looks like this:**
  - one person is talking in the center of the frame
  - the camera is positioned slightly higher than the person's eye level
  - they use flat lighting, and the lights are positioned high up so they're coming down on the person (it makes them look better)
  - there is a seamless paper background behind the person
  - they use a back light that creates a halo effect in the background
  - sometimes they use an office as a background and blur it out

- Equipment they use:
  - Lights: Kino Flo Diva Lite
  - Background: Savage seamless paper
  - Audio: shotgun mic pointing down towards the speaker
  - Camera: Canon C100 or Canon 5D
  - Teleprompter
  - Ring light

- The Wistia setup works best for explainer videos or Q&As, where you only have one person speaking, there is no movement and no other camera angles

- If you use this setup, you will need to spice it up in editing by adding graphics and other things so people don't get bored just staring at a person talking

Setup #2: The interview

H2GY1K

LECTURE SUMMARY

Covered in this lecture:

How to set up for an interview

- The interview setup works for explainer videos, testimonials, or case studies

- **#1 The interviewer is off camera**

  - in this case, the interviewee is positioned to one side and looking towards the interviewer
  - you need two light sources pointing towards the subject (key light & fill light), and, optionally, a back light
  - all lights have to have the same temperature
  - audio: shotgun mic or lavalier
  - if you want people to hear the questions, you have to mic the interviewer as well
  - video: one camera or two cameras if you need more angles to switch between

- **#2 The interviewer is on camera**

  - you need to use another set of lights for the interviewer
  - you need at least two cameras - one filming each person
  - make sure all the cameras have the same settings

- If you have an interactive interview, the interviewer has to be on camera

- If you just want to display the questions in some way, you can put them on the screen in editing and don’t show or mic the interviewer at all
- Use a seamless paper background or an adequate location

Setup #3: The talk show

H2GY1K

LECTURE SUMMARY

Covered in this lecture:

How to set up for a talk show

- In a talk show, two or more people participate in an engaging conversation
- You can round up some experts on a topic and do a talk show - you'd usually create a whole series of similar videos with various people involved
- Ask yourself this question: Can you get everyone in the same room together?
- If yes, you'll need a studio type setup with enough space for everyone
- A talk show involves hosts and guests (one or more of each)
- Every person on screen has to be well lit, everyone needs a microphone, and you probably need more than one camera
- **How a talk show is usually set up:**

  - people are gathered around a table or a desk, with hosts on one side, and guests on the other, or mixed in between
  - there is a camera that films everyone from farther away to establish where everyone is positioned

- other cameras are filming close-ups of each person, or of two people at a time
- everyone is looking towards the other people when talking

- You can set up fixed cameras and just piece the images together in editing, or you can have an operator who makes live changes, zooms in and out, etc.

- For a talk show, you will need at least four lights positioned behind the cameras, in order to avoid shadows, and two back lights

- Audio: you can use lavalier mics or have large mics set up on the table in front of each person

- Does it make sense to you to make a large production like this?

- You could also do a talk show by having each person use their own webcam /mic and broadcasting from their home or office, and then showing everyone on screen in editing

- Don't record the audio that comes through Skype, because it can be delayed and bad quality - have them record themselves in a screencast software and send you the file to sync

- **The studio approach has the best quality, but the webcam approach is the easiest to produce**

- How you decide to do this depends on what you're trying to get out of it

Examples of other common video shots

H2GY1K

LECTURE SUMMARY

Covered in this lecture:

Types of videos you might use

- Whenever you're filming something, your focus should be on getting the best footage of the main subject
- The footage you get of the main subject of your video is called A-roll and it should make up the majority of what gets seen in the final video
- There are other things you can add to the main video to make it more interesting and engaging:

- **#1 B-roll shots are videos of related people, places, and things that compliment the main part of a video and they help reinforce the key points**

- While the B-roll is shown on the screen, the person from you're A-roll is still talking
- Make note of all the B-roll shots you need and film them yourself of buy stock video footage

- **#2 If you have an app or software that you want to show you can use a screencast**

- In a screencast, you record your screen while you're demonstrating how something works

You can record your voice over it later, you can record your voice while you're showing something, and you can also film yourself while you're talking and put a small window with your face somewhere on the screen

- Software to use for screencasts: Camtasia, Screenflow, Screencast-o-matic

- **#3 Time lapse shots are great if you want to show a longer process but don't need to explain every bit of it**

- Time lapse shots are sped up videos that show the passage of time or progress very quickly

- To create a time lapse, you just place a camera somewhere and leave it there until you finish whatever you're doing, then speed the video up in editing

- **#4 A montage is when you group related shots together to demonstrate the passage of time, progress, or other related things**

- Example: Show how you built a garden by showing a series of shots of a few seconds each while talking through the process

- **#5 POV (point of view) shots are shots where the camera acts as the person's eyes, showing exactly what they see**

- You usually see this when people attach a GoPro to their heads and film their experiences

- Make sure that every time you use a different kind of video type on top of the main footage, it makes sense and compliments the main video

Production equipment and tips

H2GY1K

LECTURE SUMMARY

Covered in this lecture:

Additional equipment

- Depending on the type of videos you want to create, you might need some of the following additional things

- **#1 Teleprompter**

  - it allows you to read the words from your script off a screen while you record
  - you might consider this if you want to create a lot of scripted, longer videos
  - use a remote controlled teleprompter so you can control what comes next
  - you need a lot of practice in order to sound natural and not like you're reading
  - it saves you time because you don't have to record as many takes

- **#2 Professional voice over artists**

  - you can hire a professional voice artist if you don't want to be in the video yourself
  - check out voices.com and find the best fit for what you're trying to create

- **#3 Dollies**

  - a dolly is like a train track you build for your camera to slide on and capture smooth footage
  - it can be used for getting closer to or farther away from a subject, or sliding from one side to another to expand the view

- **#4 Sliders**

  - a slider is a miniature version of a dolly that slides back and forth on a track
  - it's used when you don't need as much movement, and it's more affordable
  - using a slider is different than zooming in or out - it's a slower movement, while zooming just creates an intense focus on something

- **#5 Jibs**

  - they are long arms that you attach a camera to so you can capture a rising or falling kind of camera movement

- **#6 Shoulder mounts**

  - they're used with cameras of all sizes to help the camera person hold the camera more easily
  - they provide more stability for hand-held shots

- **#7 Steady cam mounts / camera stabilizers**

  - they are things you can mount a camera to so you can get smoother footage when you're moving while holding the camera

- There are a lot of pieces of equipment you can buy, but they are pretty expensive, so make sure you really need them before investing in such things